L.2.2010-100
c.3
University of Alberta Library
0 1620 3682010 6

LearnEveryWare

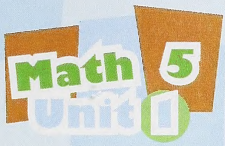
Math 5 Unit 1

Workbook

ilot®

Alberta Education

UNIVERSITY LIBRARY
UNIVERSITY OF ALBERTA



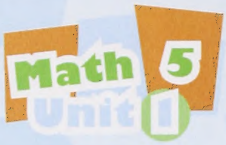
Math 5 Learn EveryWare – Unit 1 Workbook
ISBN: 978-0-7741-3054-7

Copyright © 2008, Alberta Education. This resource is owned by the Crown in Right of Alberta, as represented by the Minister of Education, Alberta Education, 10155 – 102 Street, Edmonton, Alberta, Canada T5J 4L5.
All rights reserved.

No part of this courseware may be reproduced in any form, including photocopying (unless otherwise indicated), without the written permission of Alberta Education. This courseware was developed by or for Alberta Education. Third-party content has been identified by a © symbol and/or a credit to the source. Every effort has been made to acknowledge the original source and to comply with Canadian copyright law. If cases are identified where this effort has been unsuccessful, please notify Alberta Education so corrective action can be taken.

THIS COURSEWARE IS NOT SUBJECT TO THE TERMS OF A LICENCE FROM A COLLECTIVE OR LICENSING BODY, SUCH AS ACCESS COPYRIGHT.

Math 5 Learn EveryWare has been developed under the terms of an agreement with Etraffic Press® and Alberta Education – Distributed Learning Resources Branch.



Creator
Wayne Poncia

Author
Michelle Gainer

Contributing Authors
Nancy Claire Duchaine
Grant Mellemstrand
Lisa Read

Senior Editor
Dr. Mary Ellen Bafumo

Editor
Mary Dillon

Project Manager
Lara Fisher

Production Manager
Sandi van Katwijk

Print Design Coordinator
Carrie Burke

Animators
Rob Jones
Stephen McCallum

Multimedia Designer
Troy Lemberg

Senior Developer
Jenny van Hoof

Publisher K - 12
Dr. Barry Carbol

Publisher Professional Development
Dr. Elizabeth Childs

Math Editors
Harvey Knapp
Wayne Loutet

Proofreader
Leelan Stanjek

Assistant Project Coordinator
Julia Schenck

Product Coordinator
Robert Bailey

Production Designers
Sherif Sidky
Jacqueline Rimmer
Francisco Cumayas
Liviu Peicu

Flash Developers
Harry Kim
Ryan Thomson

Illustrator
Ingrid Mesquita

Table of Contents

Lesson 1: Numbers Large and Small 1

Lesson 2: Place Value 11

Lesson 3: Estimation 17

Lesson 4: Mental Math 23

Lesson 5: Fraction Models 31

Lesson 6: Parts of a Whole — Decimals 41

Lesson 7: Place Value — Decimals 45

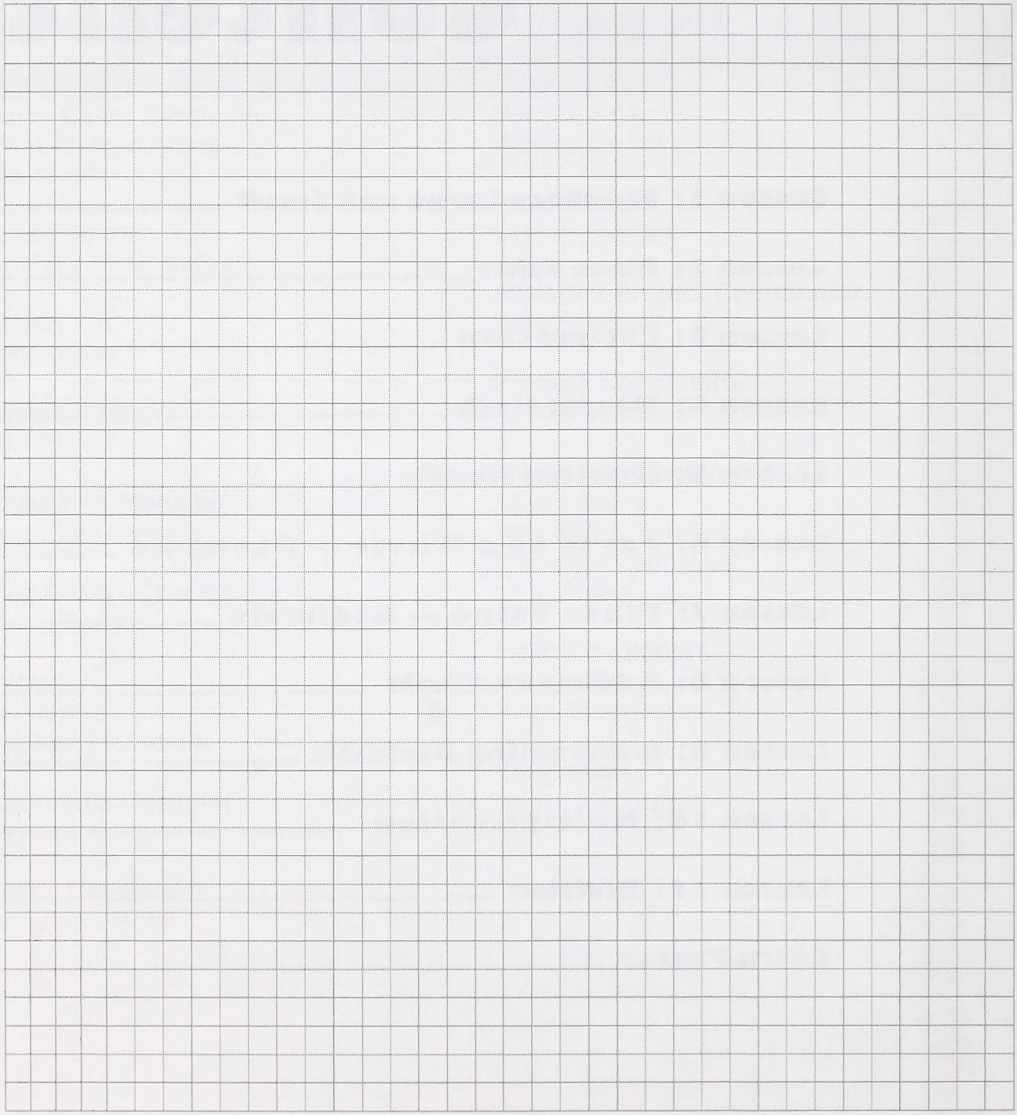
Lesson 8: Adding Decimals 49

Lesson 9: Subtracting Decimals 55

Lesson 10: Multiplication 61

Lesson 11: Division 69

Extra Pages: 75



Math 5 Unit 1

Lesson 1

Numbers Large and Small

Exploration 1: Create Large Numbers

Materials: 2 sets number cards (0 - 9)

1. Mix the card sets and place them face down in a stack. Draw three cards and place them in random order.

   Write the number in Place Value Chart A.

A.

Place	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
Value							

Can you rearrange the three cards to make it a larger number? If so, rearrange the cards and then write the number beside your original answer for number 1.

2. Draw one card from the stack and place it at the end of the three digit number. Write the number in Place Value Chart B.

B.

Place	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
Value							

What place could you have put it in to make the largest possible number?

Rearrange the numbers and then write the number beside your original answer for number 2.

3. Draw one card from the stack and place it at the end of the four digit number. Write the number in Place Value Chart C.

C.

Place	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
Value							

What place could you have it in to make the largest possible number?

Rearrange the number and then write the number beside your original answer for number 3.

4. Put all of the cards back together. Using all of the cards choose the five that will make the largest five digit number. Place them in the correct order and then write the number in Place Value Chart D. Label all of the place values also.

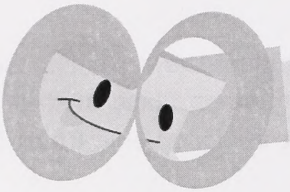
D.

Place	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
Value							

5. Put all of the cards back together. Using all of the cards choose the five that will make the smallest five digit number. Place them in the correct order and then write the number in Place Value Chart E.

E.

Place	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
Value							



Let's Explore

Exploration 2: Large Numbers and Place Value

Materials: Magazine of your choice, Scissors, Tape or glue

Use the magazine to answer the following problems:

1. Find a number with three digits. Cut it out and glue or tape it to this page. Circle the number in the tens place.

2. Find a number with four digits. Cut it out and glue or tape it to this page. Circle the number in the thousands place.

3. Find a number with four digits. Cut it out and glue or tape it to this page. Circle the number in the hundreds place.

4. Find a number with four digits. Cut it out and glue or tape it to this page. Circle the number in the ones place.

5. Find a number with five digits. Cut it out and glue or tape it to this page. Circle the number in the tens place and underline the number in the ten thousands place.

For 1 - 4: Write each of the following numbers in standard form.

1. 347197

2. 9068327

3. 208574

4. 1749073

For 5 - 9: Write each of the following numbers in standard form:

5. two million four hundred fifty-two thousand nine hundred twenty-six

6. three hundred sixty-two thousand four hundred eighteen

7. one million two hundred eighty-eight thousand two hundred forty-one

8. eight million three hundred seventeen thousand four hundred ninety-three

9. five hundred twenty-one thousand six hundred twenty-eight

10. Complete the table with the value of each place.

Place	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
Value							

11. Describe in words the pattern of the values in the table.

12. Each digit's value is _____ times the value of the number to the right of it.

    A. 100

    B. 10

    C. 1 000 000

    D. 1 000

13. Where would you most likely find a large number in print? _____

    A. a recipe

    B. the score at a hockey game

    C. 2006 Census of Canadian population

    D. kilometres you drive to visit your family in the next city

14. Write an estimate of:

    A. How many students that you think attend your school? _____

    B. How many people live in your city? _____

    C. How many people live in your province? _____

For 15 - 20: Using a current magazine or newspaper, find large numbers that fit the following descriptions, and name their source.

15. Find a number whose hundred thousands place is a digit from 3 to 7. Underline the hundred thousands place.

    Description _____ Number _____
    Source: _____

16. Find a number with a millions place that has a digit from 8 to 10. Underline the millions place.

    Description _____ Number _____
    Source: _____

17. Find a number with a ten thousands place with a digit from 2 to 5. Underline the ten thousands place.

    Description _____ Number _____
    Source: _____

18. Find a number that has a value greater than 100 000.

    Description _____ Number _____
    Source: _____

19. Find a number that has a value less than 1 000 000 and greater than 600 000.

    Description _____ Number _____
    Source: _____

20. Find a number that has a value greater than 10 000 and less than 100 000.

    Description _____ Number _____
    Source: _____

21. Reflect: Write a number that is over 100 000. What is the place value of each digit?

Mixed Review

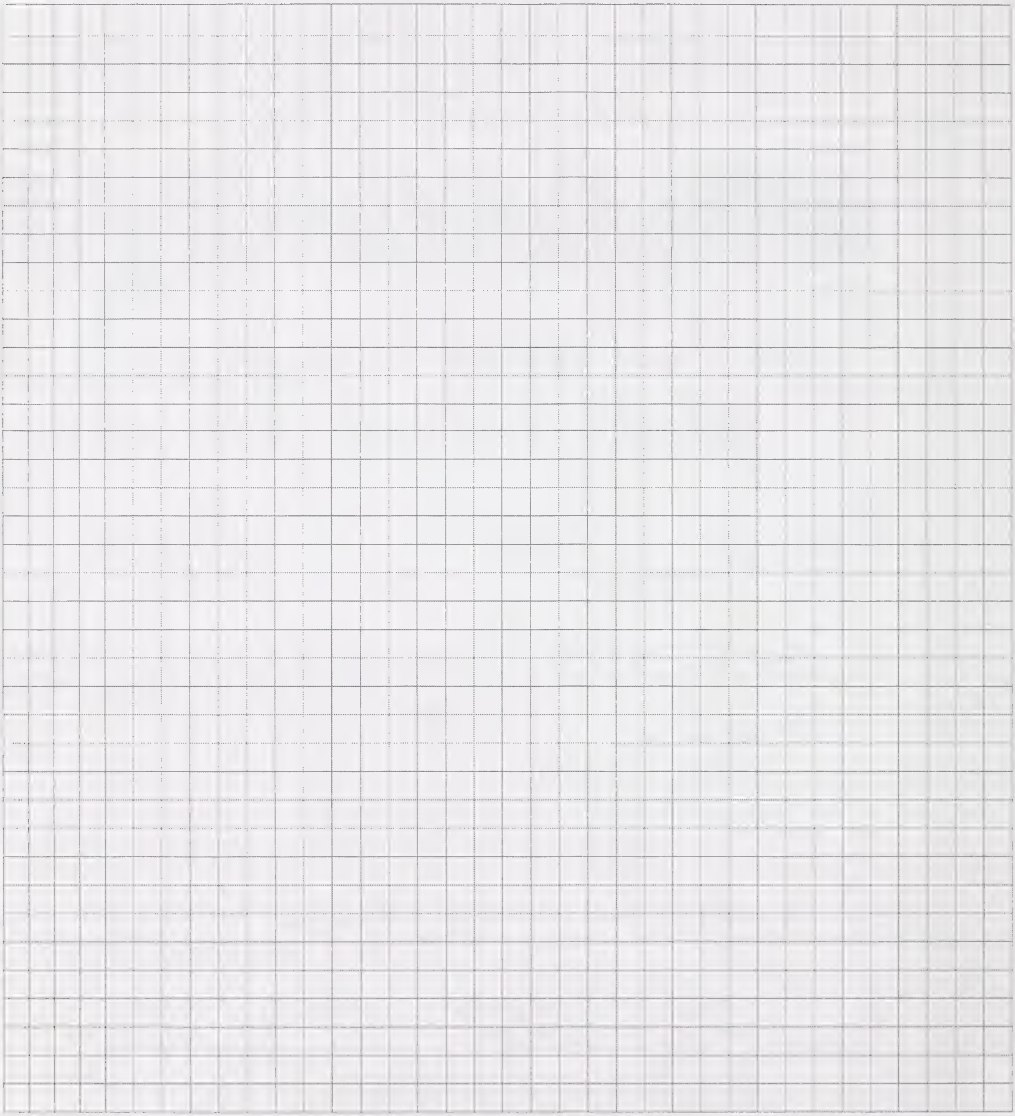
For 1 – 4: Write the number represented by the expanded notation:

1. 600 + 30 + 8

2. 800 + 10 + 1

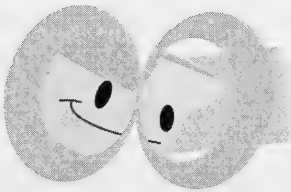
For 3 – 5: Write the following numbers in expanded notation:

3. 496 = _____
4. 831 = _____
5. 702 = _____



Lesson 2

Place Value



Let's Explore

Exploration 1: Matched Pairs

Materials: 30 Index cards, Pencil or marker

In this activity you will be making your very own memory game.

1. Write each of the following numbers on the index cards. Write one number per card.
   6 819, 12 503, 470 115, 898, 95 721, 3 416, 75 383, 1 800 992, 407, 234 091, 2 787 443, 9 055, 913, 81 632, 186 975.

   This will be a total of 15 cards.

2. For each of the cards that you filled out in Step 1 you will make a partner card for it with the 15 blank cards that are left. For each of the numbers on one card, make a matching card for it by writing the number in expanded notation. Example:

   Card: 6 819
   Matching Card: (6 x 1 000) + (8 x 100) + (1 x 10) + (9 x 1)

3. Now that you have 15 pairs of cards place them in a stack face down. Shuffle the cards and then place them in 5 rows of 6 cards each.

4. Turn over two cards at a time. If the number and the expanded notation are the same you have made a match. If they are not a match turn them back over and try again. You will continue playing until you have matched all of the pairs.

Let's Practice

For 1 - 5: Write the value of the underlined digit.

1. 2 39<u>1</u> 075

2. <u>8</u> 129 370

3. 645 <u>7</u>02

4. 4 <u>5</u>00 204

5. 7 1<u>3</u>9 752

For 6 - 7: Use the following number to answer the questions:

6 210 489

6. What number is in the thousands place?

7. What number is in the hundred thousands place?

Remember that you can use place value charts for problems in this lesson. You will find some blank ones at the back of this Unit in your Workbook.

For 8 - 12: Write the standard form number given in expanded notation.

8. 7 302

9. 39 820

10. 142 365

11. 10 200

12. 2 350 015

For 13 - 14: Write the following in standard form.

13. two hundred thousand, five hundred thirty-seven

14. 1 000 000 + 200 000 + 6 000 + 80 + 4

15. Reflect: Nina and Alyssa wrote the following answers. Who is wrong and why?

Write twenty-two thousand four hundred fifty in standard form.

Mixed Review

For 1 – 3: Put the following numbers in order from least to greatest:

1. 472, 281, 427, 479

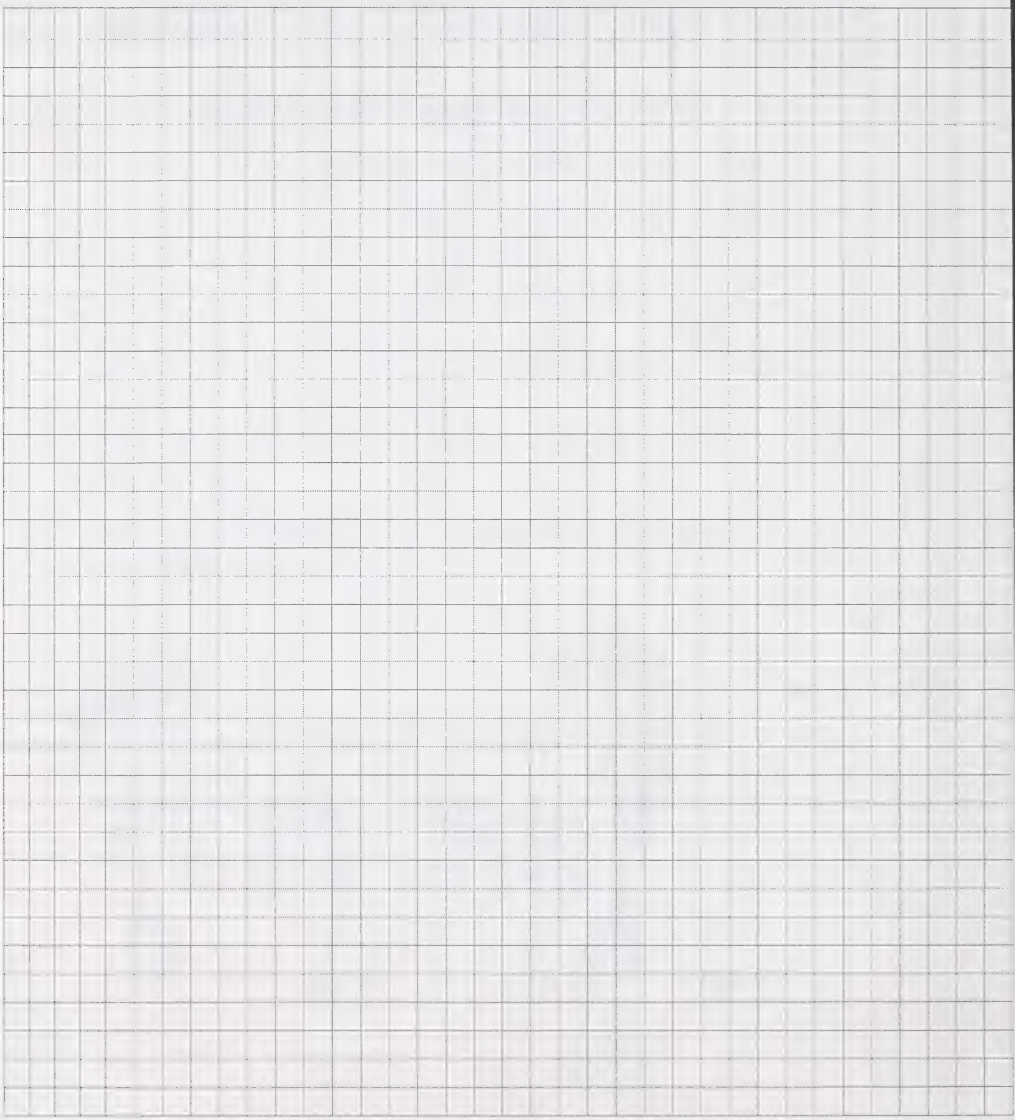
2. 9 334, 9 716, 9 434, 9 671

3. 51 019, 53 798, 51 018, 52 798

For 4 – 5: Put the following numbers in order from greatest to least:

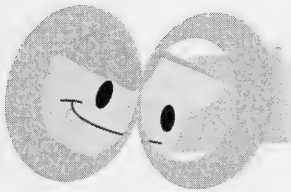
4. 30 147, 31 609, 32 001, 30 657

5. 8 214, 8 421, 8 124, 8 215, 8 125



Lesson 3

Estimation



Let's Explore

Exploration 1: Let's Go on a Vacation!

Materials: Paper, Pencil, Internet connection

You are going to get to go on vacation for 3 nights to New York City! It is all up to you to make the plans on how to get there, where to stay, how to much to spend on eating, and what to see or do while you are there. You will need to follow these steps to make your plans.

1. Choose the type of transportation you will use. Your choices are car, train, bus and airplane. Research how much it will cost to get to and from New York. Write your choice and the amount that it will cost you.

2. Choose which hotel that you will stay in. How much will it be for a three night stay? Write your hotel name and the cost.

3. Choose how much you will spend each day on three meals. Write the total amount for 3 days.

4. Choose three things you would like to do or go see while you are there. How much will each one cost? Write your three places or things and the amount it will cost.

5. Once you have made all of your choices you will need to find the estimate of how much the trip will cost. You may use any of the types of estimation in this lesson. List what kind of estimation you are using and then show your work for finding the total amount. Are you surprised at how much it costs to go on vacation?

Let's Practice

For 1 - 5: Estimate the sum of the following questions using front-end rounding.

1. $\begin{array}{r} 2\,739 \\ +\ 1\,212 \\ \hline \end{array}$

2. $\begin{array}{r} 4\,381 \\ 6\,877 \\ +\ \ 919 \\ \hline \end{array}$

3. $\begin{array}{r} 1\,500 \\ 4\,299 \\ +\ 5\,019 \\ \hline \end{array}$

4. 9 172 + 853

5. 6 891 + 3 347 + 1 882

For 6 - 10: Estimate the difference of the following questions using front-end rounding.

6. 8 261
   - 2 377

7. 3 592
   − 610

8. 29 786
   − 1 350

9. 5 781
   − 2 299

10. 1 842
    − 933

For 11 - 15: Find the sum of the following questions using compensation.

11. 78 + 27

12. 18 + 32

13. 223 + 57

14. 123 + 52

15. 34 + 91

For 16 - 20: Estimate the answer to each division problem using compatible numbers.

16. 6 239 ÷ 2

17. 27 981 ÷ 3

18. 9 845 ÷ 2

19. 12 113 ÷ 3

20. 1 824 ÷ 6

21. Reflect: What value is closer to the exact answer for 2 345 + 4 213 + 1 578? Is it front-end estimation or using compatible numbers? Explain your answer.

Mixed Review

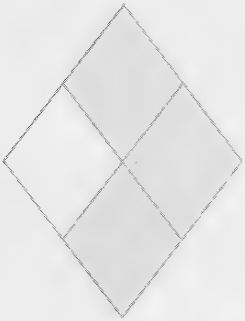
For 1 – 3: Illustrate the following fractions.

1. $\frac{3}{5}$

2. $\frac{1}{4}$

3. $\frac{7}{8}$

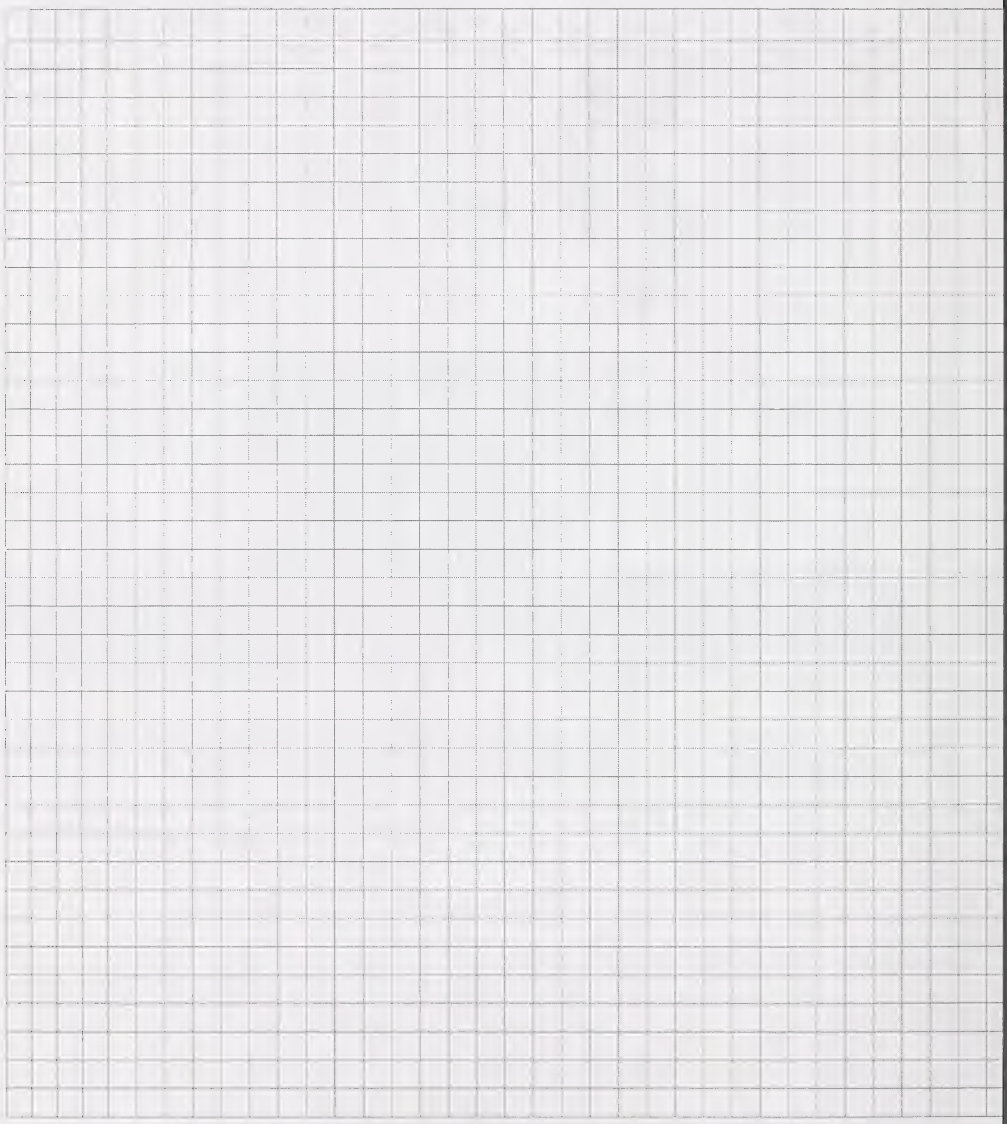
For 4 – 5: Write a fraction for the shaded sections:

4. 

_____

5.

_____



Lesson 4

Mental Math

Let's Explore

Exploration 1: Patterns of Multiplication

Materials: 8 pencil crayons

Use the Hundreds Charts found after number 16 and complete the following. Use a different chart for each set of facts:

1. Shade the answers to the 2s facts from 2 x 1 to 2 x 9 using one colour.
2. Extend the pattern you see to all numbers on the chart.
3. Shade the answers to the 3s using another colour.
4. Extend the pattern you see to all numbers on the chart.
5. Shade the answers to the 4s using another colour.
6. Extend the pattern you see to all numbers on the chart.
7. Shade the answers to the 5s using another colour.
8. Extend the pattern you see to all numbers on the chart.
9. Shade the answers to the 6s using another colour.

10. Extend the pattern you see to all numbers on the chart.
11. Shade the answers to the 7s using another colour.
12. Extend the pattern you see to all numbers on the chart.
13. Shade the answers to the 8s using another colour.
14. Extend the pattern you see to all numbers on the chart.
15. Shade the answers to the 9s using another colour.
16. Extend the pattern you see to all numbers on the chart.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Lesson 4: Mental Math

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Let's Practice

For 1 - 6: Complete the following by skip counting:

1. Skip count by threes to complete:

42				54				69

2. Skip count by fours to complete:

8				28				44

3. Skip count by sixes to complete:

6				36				

4. Skip count by sevens to complete:

14						56			77

5. Skip count by eights to complete:

16						72			

6. Skip count by nines to complete:

0									81

7. How could you use skip counting to solve 12 x 6? Explain your answer.

For 8 - 13: Use the mental math strategy of skip counting to solve.

8. 2 x 6 = _____ 9. 2 x 8 = _____ 10. 9 x 5 = _____

11. 8 x 6 = _____ 12. 12 x 7 = _____ 13. 12 x 9 = _____

For 14 - 19: Use the mental math strategy of doubles to solve.

14. 6 x 7 = _____ 15. 9 x 8 = _____ 16. 7 x 7 = _____

17. 4 x 5 = _____ 18. 7 x 8 = _____ 19. 5 x 6 = _____

For 20 - 25: Use the mental math strategy of halving and doubling to solve.

20. 5 x 4 = _____ 21. 4 x 7 = _____ 22. 6 x 5 = _____

23. 18 x 5 = _____ 24. 15 x 4 = _____ 25. 18 x 4 = _____

26. How could you use doubles to solve 8 x 9?

27. How could you use halving and doubling to solve 12 x 5?

28. How could you use halving and doubling to solve 5 x 8?

For 29 - 32: Use the mental math strategy of annexing to solve.

29. 200 x 8 = _____ 30. 40 x 7 = _____

31. 50 x 7 = _____ 32. 700 x 9 = _____

For 33 - 38: Use the mental math strategies of distributive property and patterns with 9s to solve.

33. 88 x 9 = _____

34. 29 x 8 = _____

35. 39 x 7 = _____

36. 492 x 5 = _____

37. 97 x 8 = _____

38. 215 x 9 = _____

39. Reflect: How does understanding place value help with multiplying?

Lesson 4: Mental Math

Mixed Review

For 1 – 5: Add or Subtract.

1. 12 + 18 + 15 = _____

2. 25 + 35 + 65 = _____

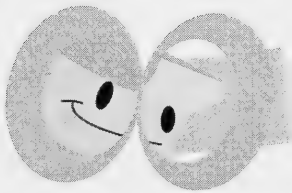
3. 41 + 85 + 120 = _____

4. 85 – 48 = _____

5. 94 – 45 = _____

Lesson 5

Fraction Models



Let's Explore

Exploration 1: What Fraction of the Bag?

Materials: Small bag or package of multicoloured objects, Pencil

1. Open your bag of objects and record the name of each colour in the table.
2. Group the objects by colour.
3. Count the number of objects in each group and record in your table.
4. Add up the number of each group to find the total number of objects.

5. Write a fraction for each colour of objects in the bag.

Colour	Number of this Colour	Fraction of Total

Exploration 2: Fraction Models

Materials: Fraction Strips, Pencil

1. Identify fractions equivalent to $\frac{1}{2}$ by comparing lengths of fraction strips.

2. Identify fractions equivalent to $\frac{1}{3}$ by comparing lengths of fraction strips.

3. Identify fractions equivalent to $\frac{3}{4}$ by comparing lengths of fraction strips.

Exploration 3: Comparing Fractions

Materials: Pencil crayons

For 1 - 5: Alyssa has 5 blue marbles, Daksha has 9 red marbles, and Nina has 4 yellow marbles.

1. Draw a picture of the problem using your pencil crayons.

2. What part of the marbles are red?

3. What part of the marbles are blue?

4. What part of the marbles are yellow?

5. Write the fraction of the marbles that each kid has, in order from least to greatest.

For 6 - 8: Cameron colours $\frac{1}{2}$ of the rectangle green. Lian colours $\frac{1}{4}$ of the rectangle purple. Zach colours $\frac{3}{8}$ of the rectangle orange.

6. Colour the parts of the rectangle as described.

7. Who has the largest part of the rectangle shaded?

8. Write the fractions in order from least to greatest.

Let's Practice

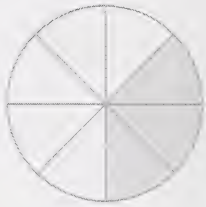
For 1 - 4: In a bag there are 3 green marbles and 5 blue marbles.

1. What is the total number of marbles that are in the bag? _____
2. How many are green? _____ How many are blue? _____
3. What fraction of the marbles are green? _____
4. What fraction of the marbles are blue? _____

For 5 - 8: A farmer has twelve sheep. One is black and the rest are white.

5. What is the total number of sheep? _____
6. How many are black? _____ How many are white? _____
7. What fraction of the sheep are black? _____
8. What fraction of the sheep are white? _____

For 9 - 13: Use the given figure to answer the following questions.



9. What is the total number of parts in the circle? ___
10. How many parts are shaded? _____
11. How many parts are not shaded? _____
12. What fraction of the circle is shaded? _____
13. What fraction of the circle is not shaded? _____

For 14 - 16: Write a fraction for the shaded part of each circle.

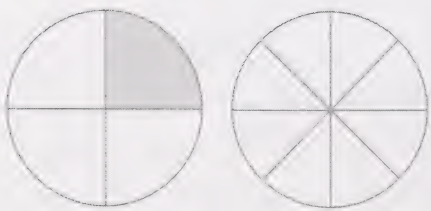
14. _____

15. _____

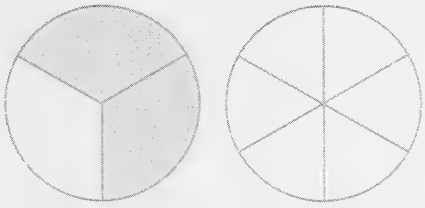
16. _____

For 17 - 18: Use the blank circle to find a fraction equivalent to the given circle.

17. $\frac{1}{4}$ = _____



18. $\frac{2}{3}$ = _____



For 19 - 27: Compare the following fractions. Complete with <, > or =. Use your fraction strips to help you.

19. $\frac{2}{3}$ _____ $\frac{1}{3}$

20. $\frac{3}{8}$ _____ $\frac{4}{8}$

21. $\frac{3}{4}$ _____ $\frac{2}{4}$

22. $\frac{1}{3}$ _____ $\frac{1}{4}$

23. $\frac{1}{2}$ _____ $\frac{6}{12}$

24. $\frac{2}{5}$ _____ $\frac{2}{6}$

25. $\frac{1}{2}$ _____ $\frac{5}{8}$

26. $\frac{3}{4}$ _____ $\frac{2}{3}$

27. $\frac{4}{8}$ _____ $\frac{4}{10}$

For 28 - 30: Order the fractions from least to greatest. Use fraction strips, a pictorial representation or other concrete models to solve.

28. $\frac{3}{12}, \frac{4}{10}, \frac{3}{5}$ _____

29. $\frac{5}{8}, \frac{1}{2}, \frac{2}{3}$ _____

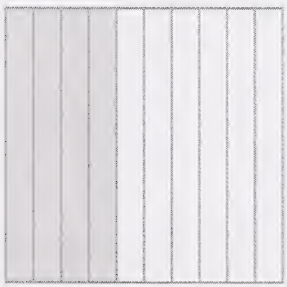
30. $\frac{4}{6}, \frac{7}{12}, \frac{2}{5}$ _____

31. Reflect: What would it mean if a fraction had a larger numerator than its denominator?

Mixed Review

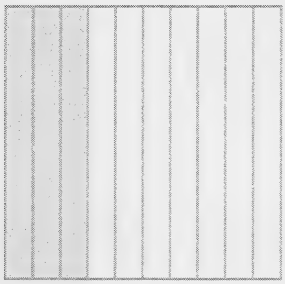
For 1 – 3: What fraction of the picture is shaded?

1. _____



2. _____

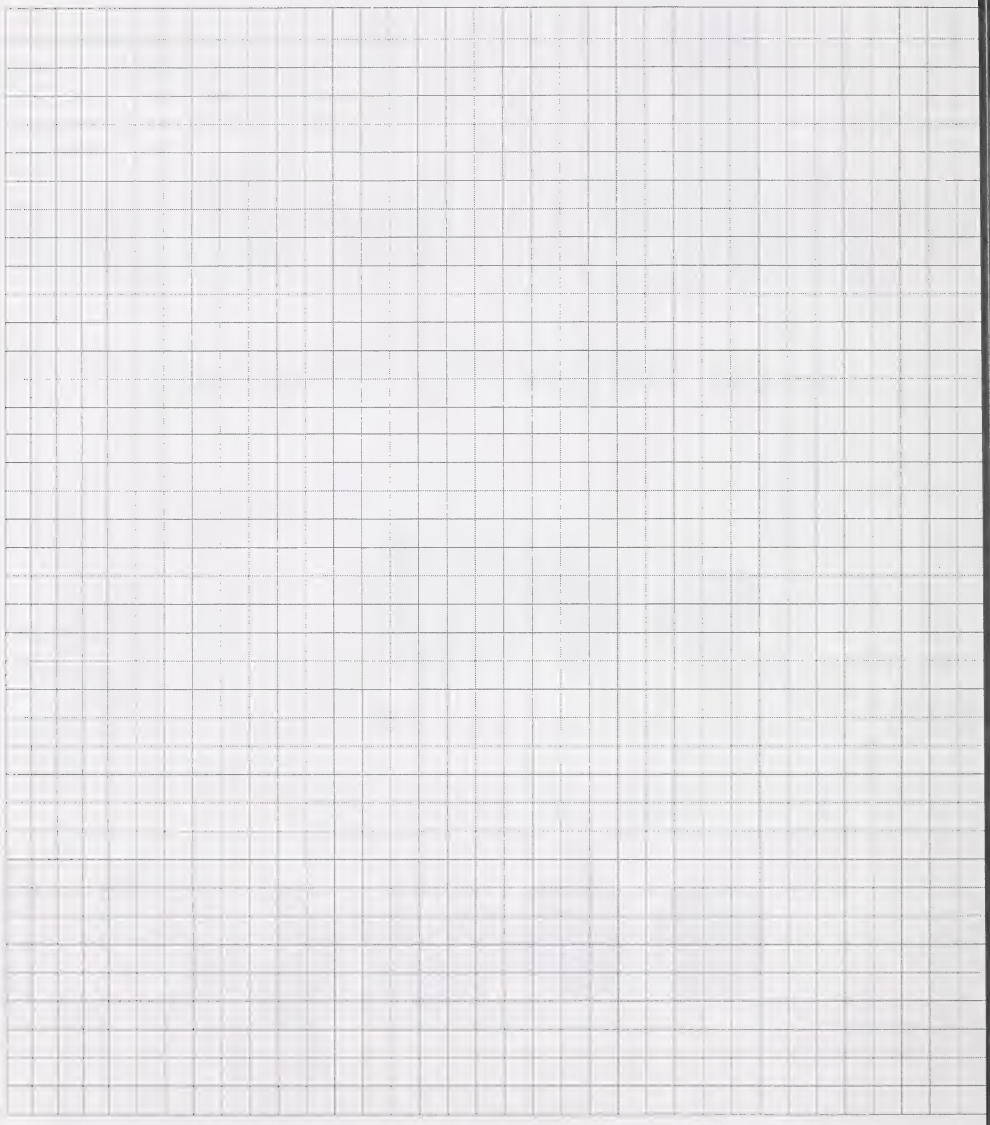
3. _____



For 4 – 5: What is the value of the money shown?

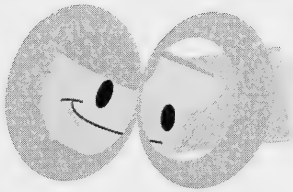
4. _____

5. _____



Lesson 6

Parts of a Whole — Decimals



Let's Explore

Exploration 1: Fraction — Decimal Patterns

Materials: Pencil

Notice the pattern to the table of equivalent fractions and decimals:

Fraction	$\frac{3}{10}$	$\frac{6}{10}$	$\frac{7}{10}$	$\frac{9}{10}$	$\frac{4}{100}$	$\frac{23}{100}$	$\frac{30}{100}$	$\frac{68}{100}$
Decimal	0.3	0.6	0.7	0.9	0.04	0.23	0.30	0.68

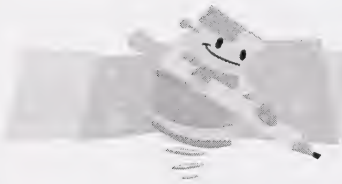
1. What do you notice about the decimals when the denominator is 10?

2. What do you notice about the decimals when the fraction's denominator is 100?

3. Reflect: What is the relationship between the denominator of the fraction and the place value of the decimal?

4. Apply this knowledge: Complete the table.

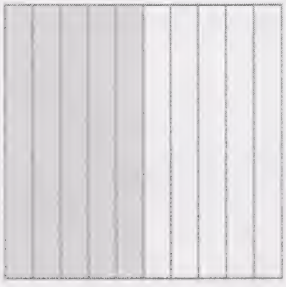
Fraction	$\frac{2}{10}$		$\frac{8}{10}$		$\frac{21}{100}$	$\frac{39}{100}$		
Decimal		0.5		0.12			0.57	0.84

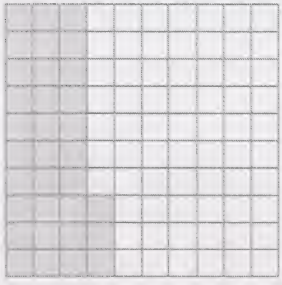


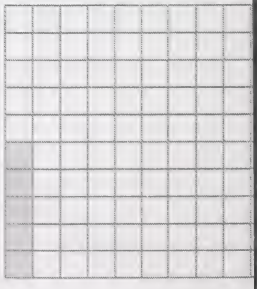
Let's Practice

For 1 - 3: Write the decimal to match the shaded part of the pictures

1. _____ 2. _____ 3. _____

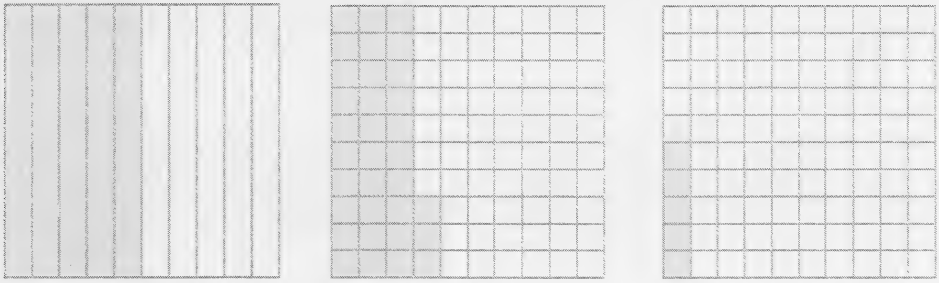






For 4 - 6: Write a fraction to match the shaded part of the pictures.

4. _____ 5. _____ 6. _____



For 7 - 12: Write each decimal as a fraction.

7. 0.45 = _____ 8. 0.02 = _____ 9. 0.325 = _____

10. 0.6 = _____ 11. 0.021 = _____ 12. 0.39 = _____

For 13 - 18: Write each fraction as a decimal. You may want to use a place value chart. You will find some blank ones at the back of your workbook.

13. $\frac{3}{100}$ = _____ 14. $\frac{2}{10}$ = _____ 15. $\frac{7}{1\,000}$ = _____

16. $\frac{64}{100}$ = _____ 17. $\frac{364}{1\,000}$ = _____ 18. $\frac{90}{1\,000}$ = _____

19. Cameron says that the fraction $\frac{30}{100}$ = 0.30 and Daksha says that $\frac{30}{100}$ = 0.3. Who is right and why? Use models to show how you know.

20. Reflect: How could you write a decimal for a fraction like one-half? Can you make a model that shows how this is possible?

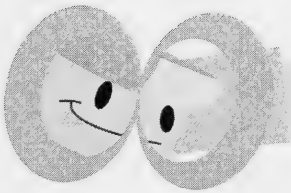
Mixed Review

For 1 – 5: Add.

1. 2.4 + 3.1 = _____
2. 8.7 + 12.4 = _____
3. 7.9 + 2.1 = _____
4. 15.23 + 2.54 = _____
5. 5.45 + 8.75 = _____

Lesson 7

Place Value — Decimals



Let's Explore

Exploration 1: Comparing and Ordering Numbers

Materials: Pencil

Animal	Rate (km/hr)
Elk	72.420
Cheetah	112.654
Lion	80.467
Ostrich	64.374
Rabbit	56.327

1. Which animal can run the fastest?

2. Which animal is the slowest?

3. Name one animal that is slower than the lion.

4. Name one animal that is faster than the elk.

5. Write the animals in order from slowest to fastest.

6. Research: Use the Internet or an encyclopaedia to find the speed of 4 more animals. Record the speed of each animal and list the animals from slowest to fastest.

Let's Practice

For 1 - 4: Are the two decimals equivalent? Write equivalent or not equivalent. Use a place value chart to figure it out. You will find blank place value charts at the back of this Unit in your Workbook.

1.	0.020 0.02	2. 0.240 0.024	3. 0.004 0.040	4. 0.600 0.006

For 5 - 8: Write two equivalent decimals for each.

5.	0.8	6. 1.2	7. 0.03	8. 0.70

For 9 - 20: Compare using <, >, or =. Use the grid paper or blank place value charts at the back of this Unit in your workbook to solve.

9. 0.45 _____ 0.35

10. 0.4 _____ 0.6

11. 0.9 _____ 0.91

12. 0.6 _____ 0.64

13. 0.32 _____ 0.23

14. 0.24 _____ 0.204

15. 0.3 _____ 0.13

16. 0.002 _____ 0.020

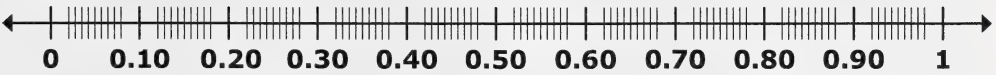
17. 0.16 _____ 0.160

18. 0.025 _____ 0.015

19. 0.012 _____ 0.12

20. 0.465 _____ 0.472

For 21 - 23: Use the number line to order the decimals from least to greatest.



21. 0.54, 0.60, 0.45, 0.4

22. 0.3, 0.5, 0.03, 0.05, 0.35

23. 0.12, 0.21, 0.2, 0.1, 0.01

For 24 - 25: Use a place value chart to order the decimals from least to greatest. You will find blank place value charts at the back of this Unit in your Workbook.

24. 0.87, 0.78, 0.8, 0.08, 0.7

25. 0.195, 0.197, 0.15, 0.295

26. Reflect: How can you order decimals without using place value charts?

Mixed Review

For 1 – 6: Practice your multiplication facts.

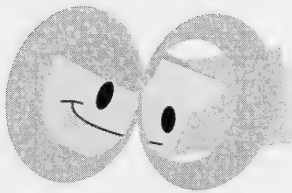
1. 2 x 9 = _____
2. 5 x 8 = _____
3. 6 x 3 = _____
4. 4 x 8 = _____
5. 7 x 9 = _____
6. 4 x 6 = _____

For 7 – 10: Complete the number sentence.

7. 8 x _____ = 64
8. _____ x 9 = 54
9. 3 x _____ = 27
10. 7 x _____ = 42

Lesson 8

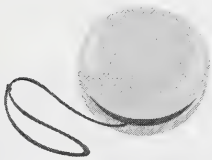
Adding Decimals



Exploration 1: Let's Go Shopping!

Materials: Pencil

Your mom has given you $10.00 to spend at the store. You can buy anything that you want as long as it costs less than $10.00. The items that you like are shown below:



Yo-yo: $3.95

Balls: $4.25

Book: $2.50

Pretzel: $1.25

Answer the following questions. Show your work.

1. What combinations of items can you buy for $10.00?

2. How many yo-yos can you buy for $10.00?

3. How many sets of balls can you buy for $10.00?

4. How many books can you buy for $10.00?

5. How many pretzels can you buy for $10.00?

Let's Practice

For 1 - 5: Use Base 10 Blocks or a picture to model each sum and then write the sum.

1. $\begin{array}{r} 1.023 \\ +\ 3.846 \\ \hline \end{array}$

2. $\begin{array}{r} 3.648 \\ +\ 6.453 \\ \hline \end{array}$

3. $\begin{array}{r} 7.930 \\ +\ 1.081 \\ \hline \end{array}$

4. 3.623
+ 4.287

5. 0.745
+ 8.147

For 6 - 13: Add.

6. 6.013
+ 2.916

7. 7.112
+ 0.974

8. 11.817
+ 3.702

9. 4.525
+ 1.684

10. 15.176
+ 3.843

11. 1.771
+ 3.229

12. 3.812
+ 5.177

13. 12.006
+ 7.134

For 14 - 19: Align and add.

14. 2.180 + 3.317

15. 16.273 + 10.328

16. 6.982 + 1.557

17. 8.374 + 2.093

18. 13.766 + 4.113

19. 10.083 + 5.136

For 20: Write a number sentence for the following problem. Solve.

20. David walked 1.239 km on day 1 and 6.872 km on day 2. How many kilometres did he walk in total?

21. Reflect: How is adding numbers with decimals different from adding whole numbers?

Mixed Review

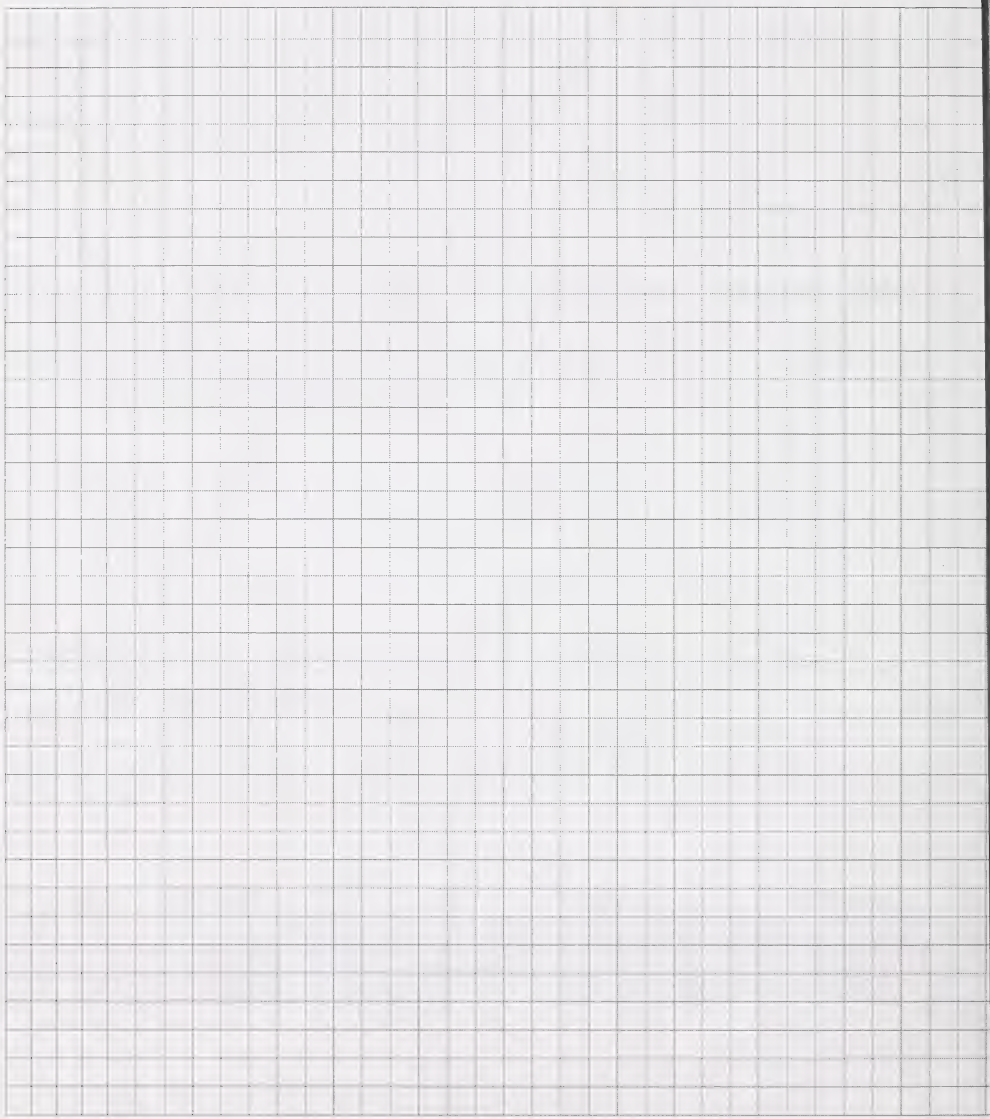
1. 2 741
   - 1 550

2. 983
   - 491

3. 7 605
   - 3 415

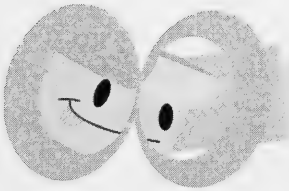
4.
$$\begin{array}{r} 471 \\ -\ 298 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 6\,249 \\ -\ 319 \\ \hline \end{array}$$



Lesson 9

Subtracting Decimals



Let's Explore

Exploration 1: Keeping Track of Your $$$

Materials: Pencil

You have your first job and have just opened up a savings account to keep your money. Fill in the Savings Booklet with the following information, finding the balance after each entry.

January 15	Deposit	$125.00
January 30	Deposit	$100.00
February 15	Deposit	$137.50
February 20	Withdrawal	$75.00
March 1	Deposit	$98.75
March 3	Withdrawal	$115.00
March 15	Deposit	$134.00
April 1	Deposit	$113.00
April 10	Withdrawal	$286.00

Date	Deposit Amount	Withdrawal Amount	Balance

What is your ending balance? _____

Let's Practice

For 1 - 19: Subtract. You will find Place Value Charts at the back of this Unit in your workbook if you need them. Check using addition. Show your work.

1. $\begin{array}{r} 6.898 \\ -\ 1.235 \\ \hline \end{array}$

2. $\begin{array}{r} 8.965 \\ -\ 0.632 \\ \hline \end{array}$

3. $\begin{array}{r} 2.601 \\ -\ 1.450 \\ \hline \end{array}$

4. $\begin{array}{r} 12.87 \\ -\ 11.762 \\ \hline \end{array}$

5. $\begin{array}{r} 4.234 \\ -\ 4.105 \\ \hline \end{array}$

6. $\begin{array}{r} 2.259 \\ -\ 1.336 \\ \hline \end{array}$

7. $5.678 - 5.569$

8. $1.435 - 0.317$

9. 10.477 – 8.468

10. 9.016 – 8.107

11. 15.264 – 5.319

12. 4.992 – 3.876

13. 7.159 – 7.146

14. 60.321 – 2.021

15. 22.964 – 20.874

16. 84.631 – 70.456

17. 4.357 – 2.342

18. 45.621 – 43.47

19. 4.963 – 4.043

20. Reflect: Explain in your own words why it is necessary for you to line up the decimal points when you are subtracting decimals.

Mixed Review

1. 5 x 7 =

2. 5 x 3 =

3. 5 x 8 =

4. 5 x 6 =

5. 5 x 12 =

Lesson 10

Multiplication

Exploration 1: Using Array Models

Materials: Pencil

The problem 18 x 12 can be modeled in this manner:

18 = 10 + 8 → 10 | 8 ; 12 = 10 + 2 ↓

10 x 10	8 x 10	10
10 x 2	8 x 2	2

This models:
18 x 12 = (10 x 10) + (8 x 10) + (10 x 2) + (8 x 2)

Multiply the problem in each box:

10	8	
100	80	10
20	16	2

Add the numbers in each box to get the product:
100 + 80 + 20 + 16 = 216
18 x 12 = 216

For 1 – 3: Write the distributive property for the multiplication model.

1. _____ + _____ + _____ + _____

20 x 10	6 x 10
20 x 3	6 x 3

2. _____ + _____ + _____ + _____

30 x 20	5 x 20
30 x 4	5 x4

3. _____ + _____ + _____ + _____

80 x 40	7 x 40
80 x 3	7 x 3

For 4 – 5: Model each product and find the answer.

4. 54 x 48

5. 74 x 32

6. Write your own multiplication problem of two digit numbers. Model the problem and find the answer.

Let's Practice

For 1 - 24: Multiply. Use estimation to check your work.

1. 35 x 20

2. 48 x 12

3. 74 x 35

4. 82 x 19

5. 17 x 16

6. 23 x 17

7. 67 x 38

8. 64 x 39

9. 80 x 23

10. 55 x 15

11. 87 x 78

12. 56 x 43

13. 83 x 39

14. 76 x 71

15. 95 x 52

16. 72 x 61

17. 99 x 44

18. 18 x 13

19. 48 x 39

20. 63 x 47

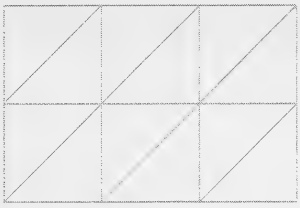
21. 54 x 35

22. 70 x 54

23. 82 x 57

24. 93 x 84

25. Apply lattice multiplication to this problem: 345 x 24



For 26 - 30: Write a number sentence for the following problems. Solve.

26. Nina made 95 bookmarks to raise money for charity. She sold every bookmark for $4. How much money did she make?

27. The school band is arranged in 8 rows of 12 students for their performance. How many students are in the band?

28. Zach and Lian are making flower arrangements for the retirement home. They used 12 flowers in each arrangement. The total number of vases they filled was 40. How many flowers did they use?

29. Alyssa volunteers at the community recreation center. She volunteered 24 weeks last year. Each week that she volunteers she works for 12 hours. How many hours did Alyssa volunteer last year?

30. Cameron earns money each summer mowing lawns for $25 per lawn. If Cameron mowed a total of 45 lawns last summer, how much money did he make?

31. Reflect: What method of multiplication is easiest for you and why?

Mixed Review

Complete.

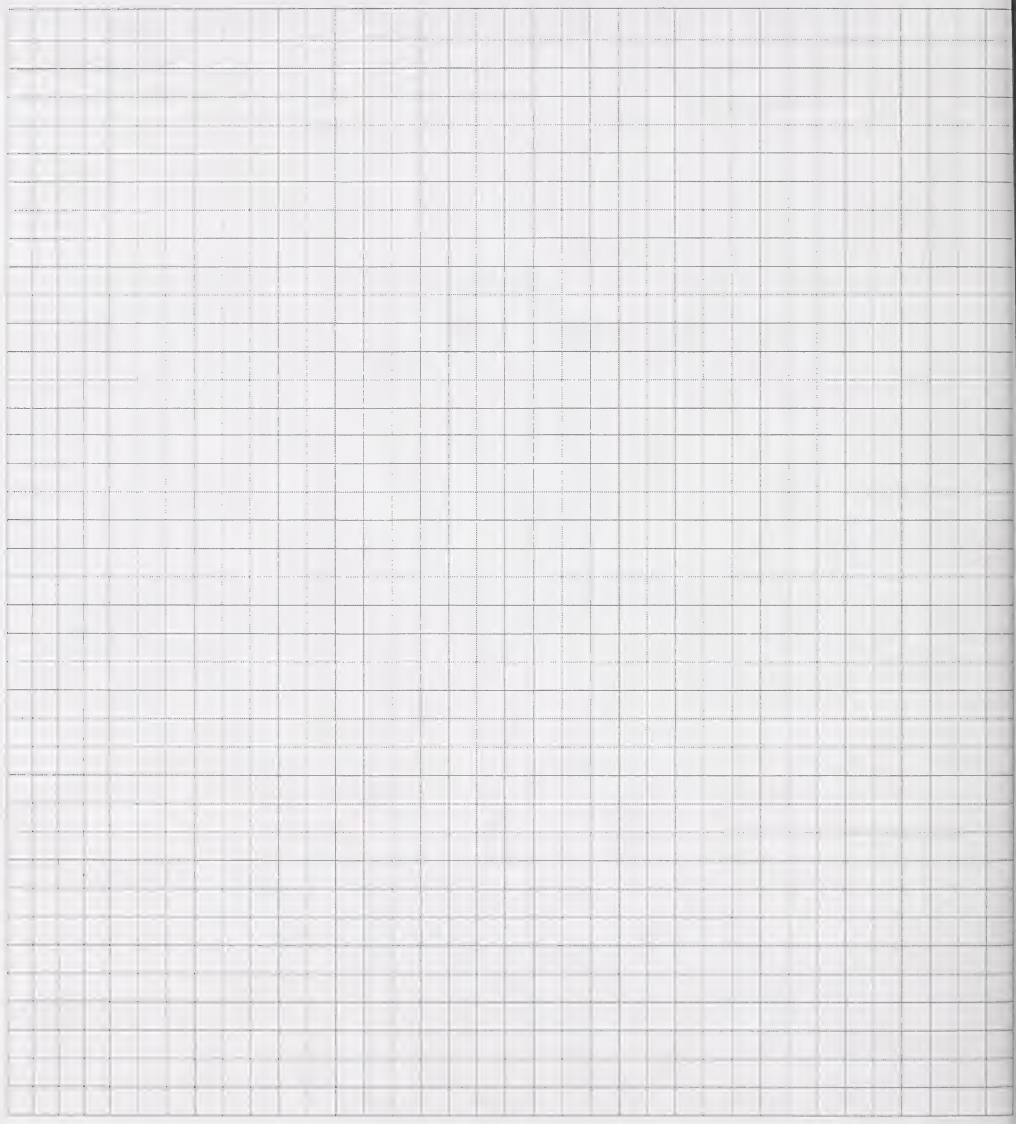
1. 5 x _____ = 30

2. 4 x _____ = 28

3. 3 x _____ = 15

4. 7 x _____ = 56

5. 6 x _____ = 54



Lesson 11

Division

Let's Explore

Exploration 1: What Remains?

Materials: About 200 counters (dry beans will work), Pencil

1. Take 185 counters. Divide the counters into two equal groups.
2. How many counters are in each group?

3. How many counters are left out when you make two equal groups?

4. Write the answer to the problem 185 ÷ 2 in remainder form.

4. Divide the 185 counters into three equal groups.
5. How many counters are in each group?

6. How many counters are left out when you make three equal groups?

7. Write the answer to the problem 185 ÷ 3 in remainder form.

8. How many equal groups can you make with 185 that will have no remainder?

9. Take 150 counters. Divide the counters into 7 equal groups.

10. 150 ÷ 7 = ___?

Let's Practice

For 1 - 15: Divide. Check by multiplication. Show your work.

1. 192 ÷ 8
2. 455 ÷ 7
3. 672 ÷ 8

4. 192 ÷ 4
5. 365 ÷ 5
6. 171 ÷ 9

7. 162 ÷ 3

8. 294 ÷ 7

9. 224 ÷ 4

10. 178 ÷ 9

11. 295 ÷ 7

12. 110 ÷ 6

13. 118 ÷ 5

14. 126 ÷ 4

15. 244 ÷ 3

For 16 - 20: Write a number sentence for the following problems. Solve. Show your work.

16. There are 128 students in the Academic League. How many teams of 6 can they make?

17. 114 students are going on the field trip and 8 students fit in each vehicle. How many vehicles are needed for the trip?

18. The baseball coach has 112 baseballs to share equally among 9 players. How many baseballs will be left over?

19. There are 160 people seated at tables for a banquet. Each table holds 7 people. How many people will be at the partially filled table?

20. Alyssa has 152 seeds to plant in her garden. She wants to plant the seeds in rows of 5. How many seeds will be in each row?

21. Reflect: Zach says that he divided to find the number of oranges in the following:

    There are 15 oranges in a bowl. Zach's mom wants to split them up among the 6 friends visiting Zach. How many oranges will each friend get?

Zach got an answer of $2\frac{3}{15}$ or 2 whole and three-fifteenths of one orange. How does Zach's answer compare to the long division answer of 2 R 3?

Mixed Review

Describe each pattern using phrases like "add 2" or "subtract 5."

1. 3, 9, 15, 21, 27 _____

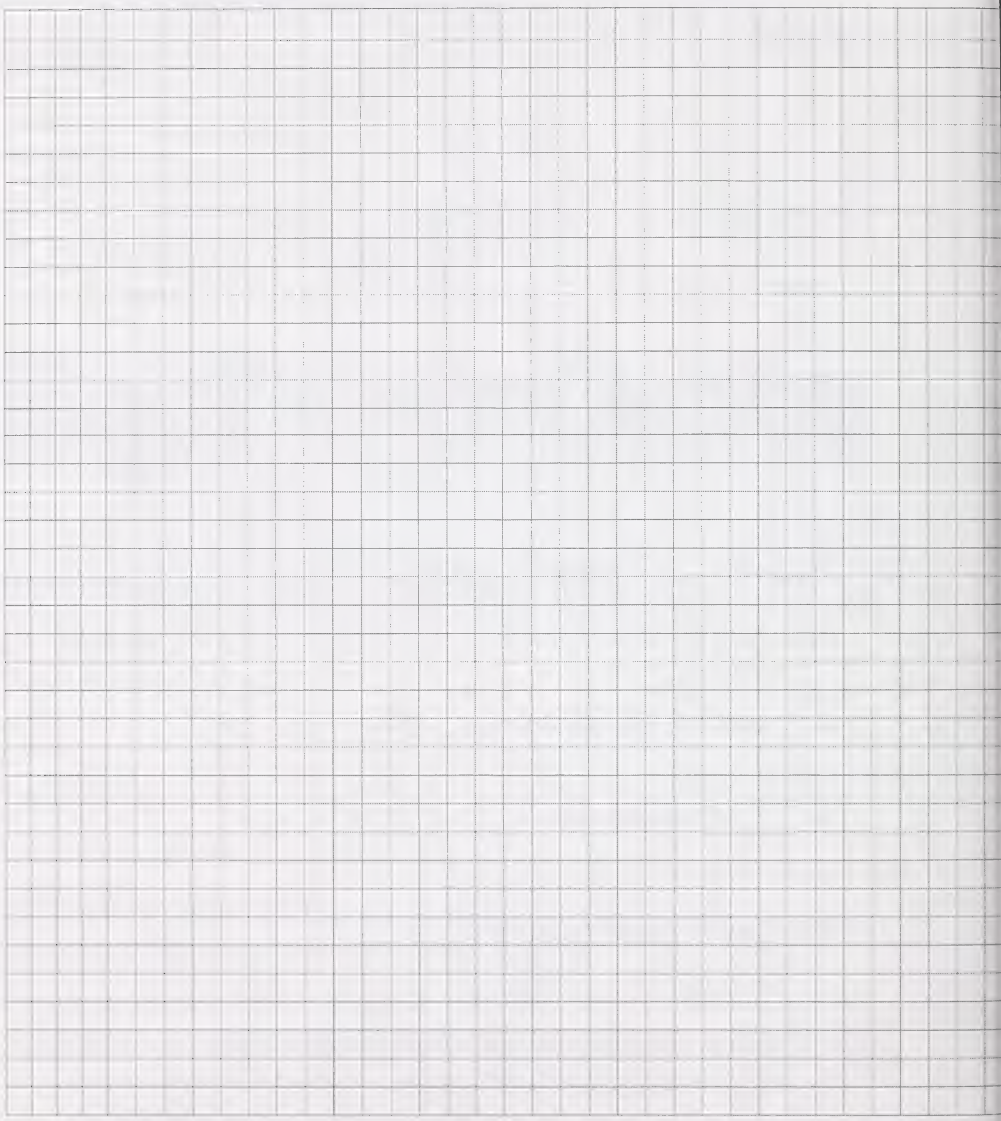
2. 100, 94, 88, 82, 76 _____

3. 7, 14, 21, 28, 35 _____

Find the missing number.

4. 4, 9, 14, _____, 24, 29

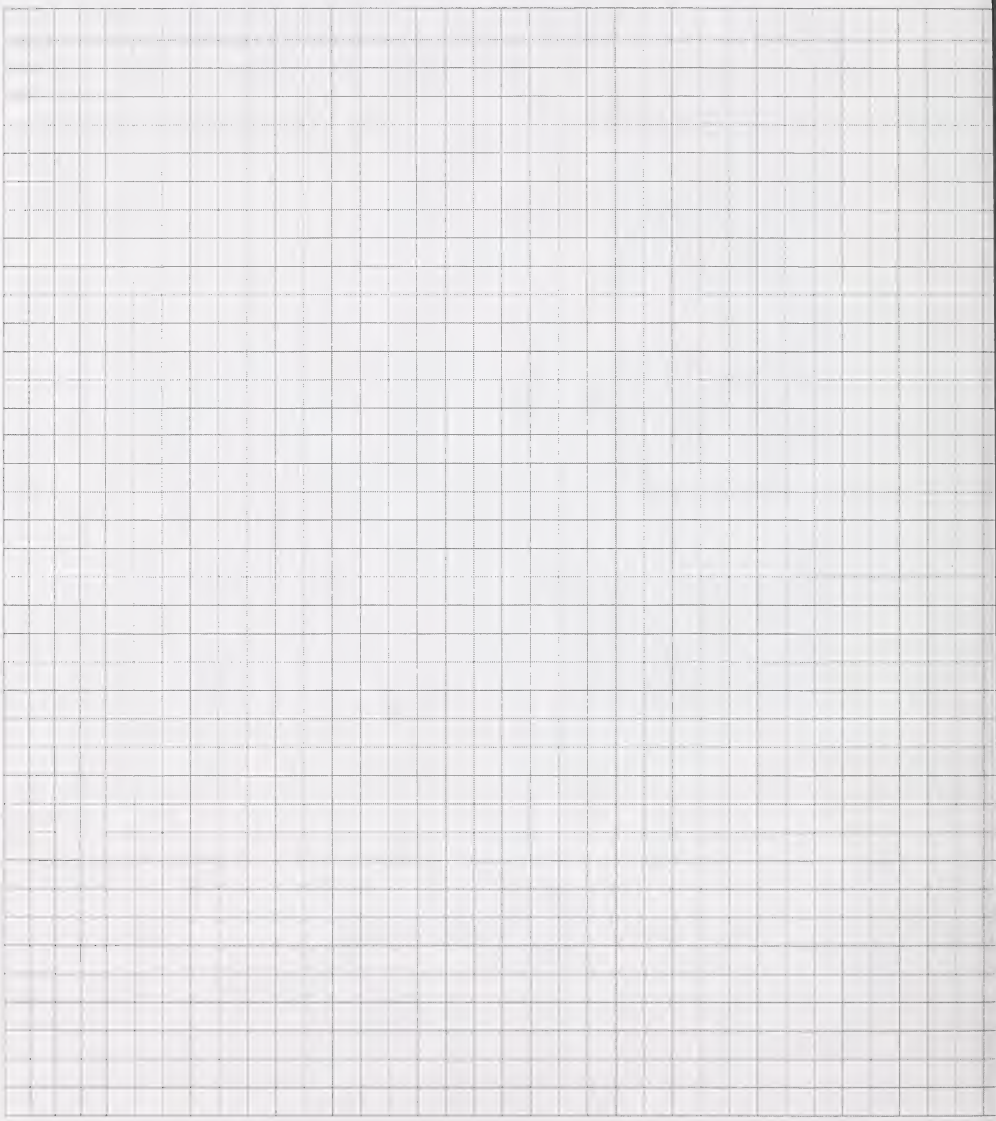
5. 34, 31, _____, 25, 22



Fraction Strips

Cut out these Fraction Strips to help you with comparing fractions. Store them in a safe place because you will use them more than once.

One Whole	1										
One-Half	$\frac{1}{2}$					$\frac{1}{2}$					
One-Third	$\frac{1}{3}$			$\frac{1}{3}$			$\frac{1}{3}$				
One-Fourth	$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$			$\frac{1}{4}$	
One-Fifth	$\frac{1}{5}$		$\frac{1}{5}$			$\frac{1}{5}$			$\frac{1}{5}$		
One-Sixth	$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$		$\frac{1}{6}$
One-Eighth	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$			
One-Ninth	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$	$\frac{1}{9}$		
One-Tenth	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	
One-Twelfth	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$	$\frac{1}{12}$



Place Value Charts

Write in these charts with pencil, as you may need to use them more than once.

Ten Thousands	Thousands	Hundreds	Tens	Ones

Ten Thousands	Thousands	Hundreds	Tens	Ones

Ten Thousands	Thousands	Hundreds	Tens	Ones

Ten Thousands	Thousands	Hundreds	Tens	Ones

Ten Thousands	Thousands	Hundreds	Tens	Ones

Ten Thousands	Thousands	Hundreds	Tens	Ones

Ten Thousands	Thousands	Hundreds	Tens	Ones

Place Value Tables

Write in these charts with pencil, as you may need to use them more than once.

Ten Thousands	Thousands	Hundreds	Tens	Ones

Ten Thousands	Thousands	Hundreds	Tens	Ones

Ten Thousands	Thousands	Hundreds	Tens	Ones

Decimal Place Value Charts

Write in these charts with pencil, as you may need to use them more than once.

Place	Hundreds	Tens	Ones	.	Tenths	Hundredths
Value						

Place	Hundreds	Tens	Ones	.	Tenths	Hundredths
Value						

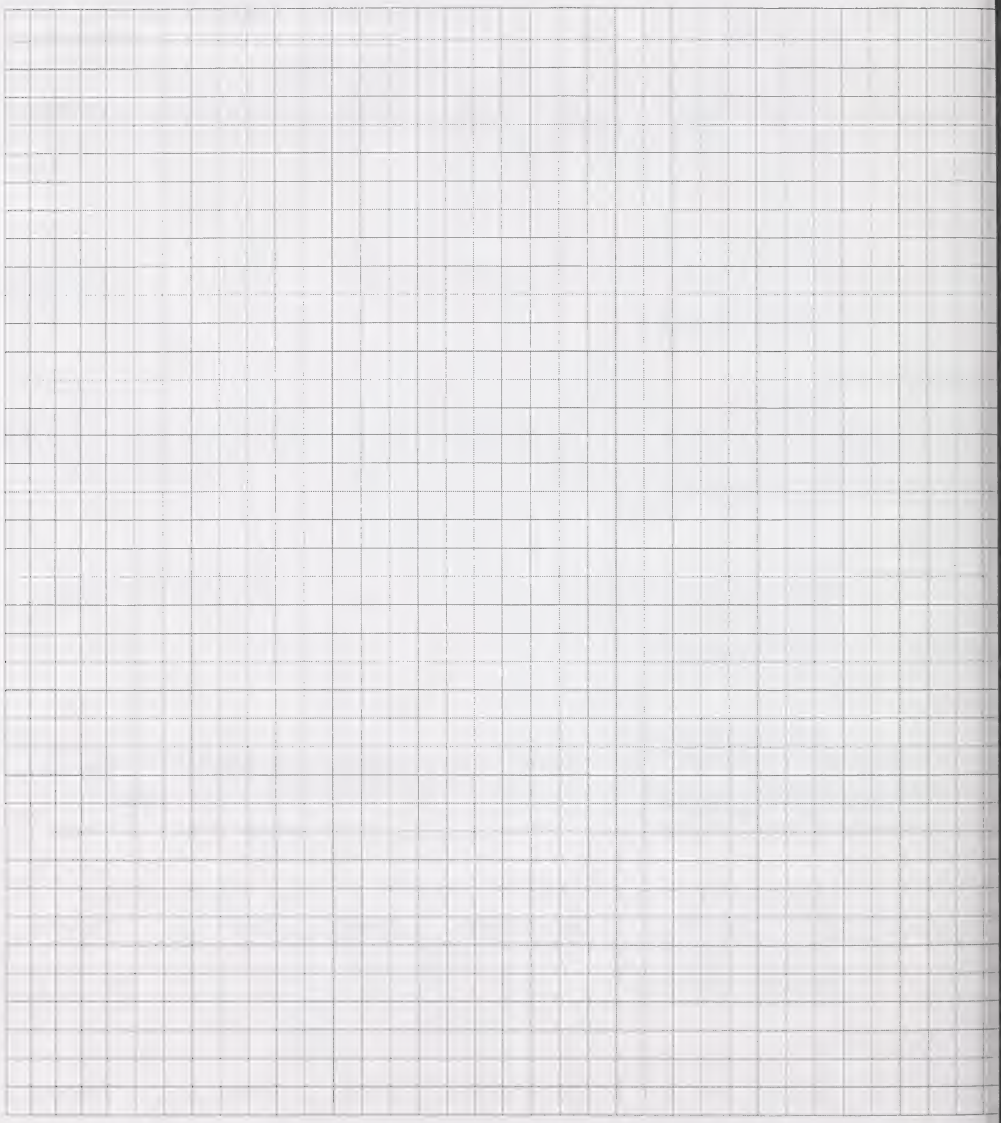
Place	Hundreds	Tens	Ones	.	Tenths	Hundredths
Value						

Place	Hundreds	Tens	Ones	.	Tenths	Hundredths
Value						

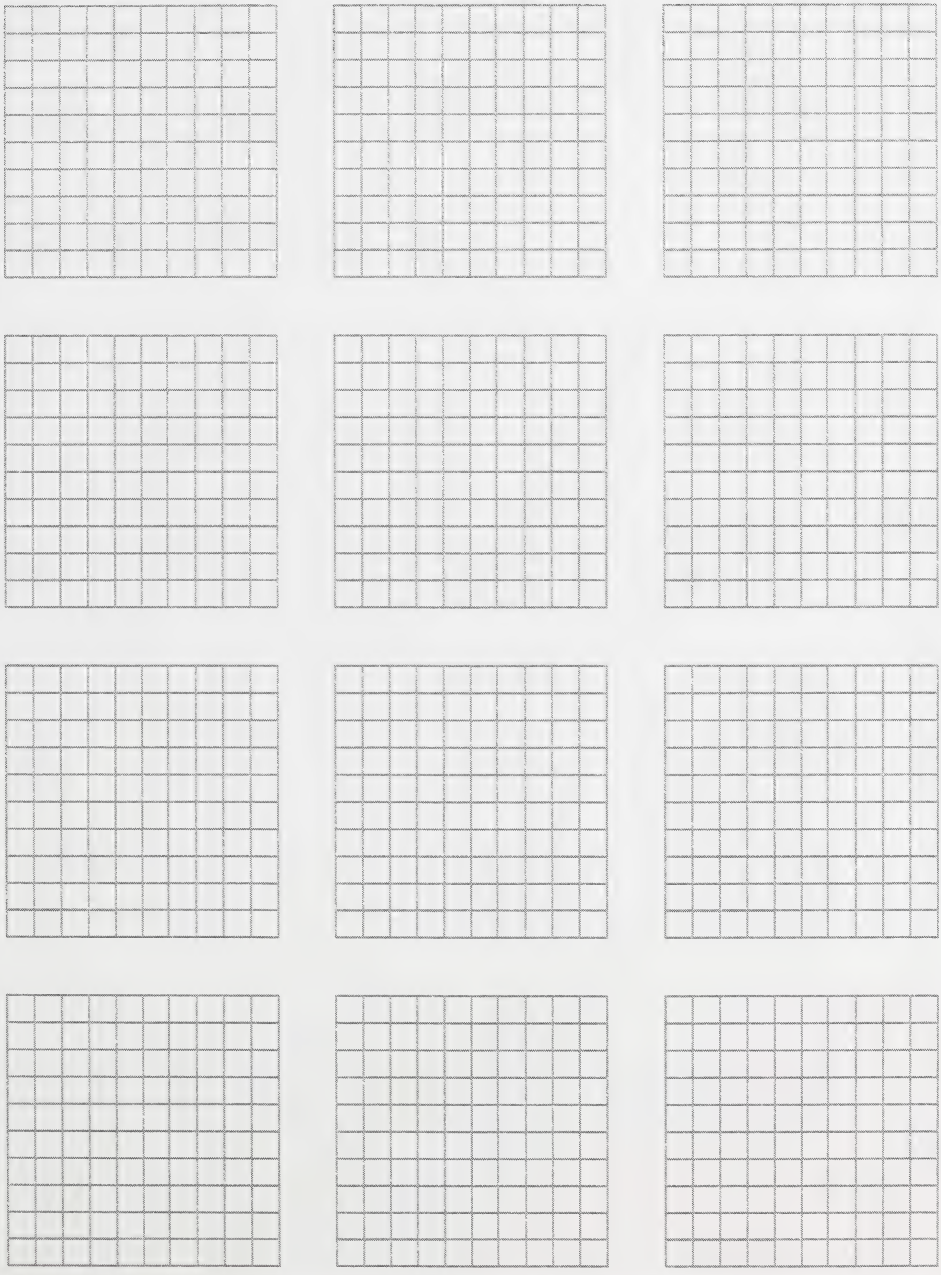
Place	Hundreds	Tens	Ones	.	Tenths	Hundredths
Value						

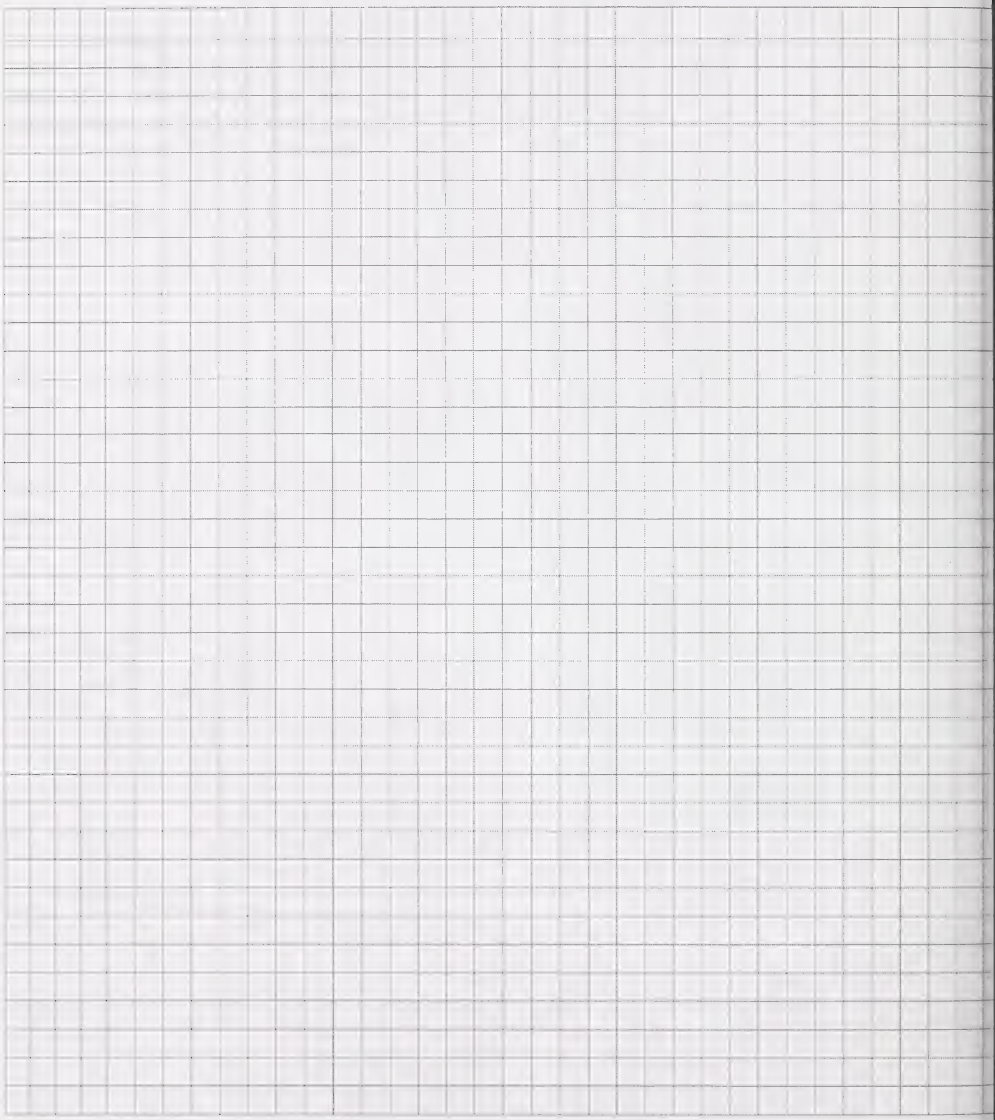
Place	Hundreds	Tens	Ones	.	Tenths	Hundredths
Value						

Place	Hundreds	Tens	Ones	.	Tenths	Hundredths
Value						

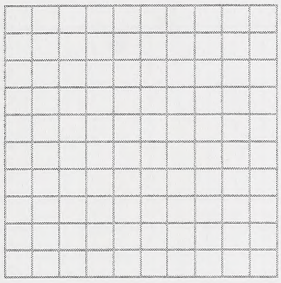
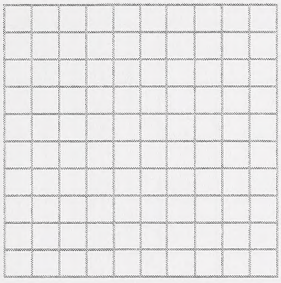
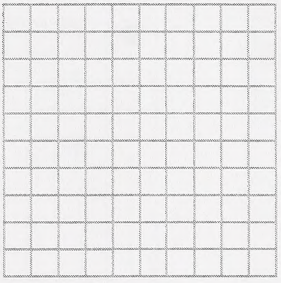
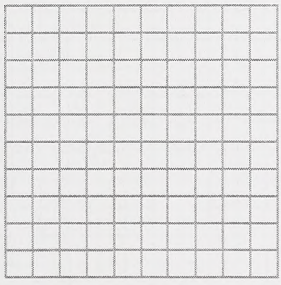
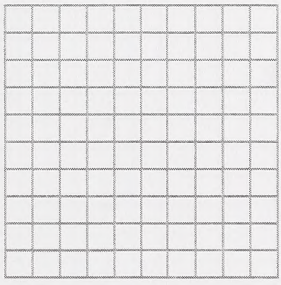
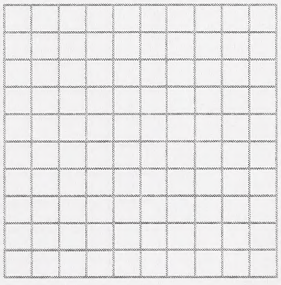
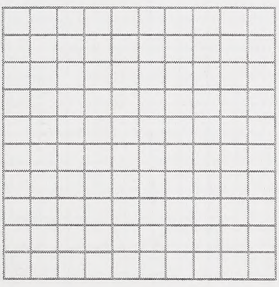
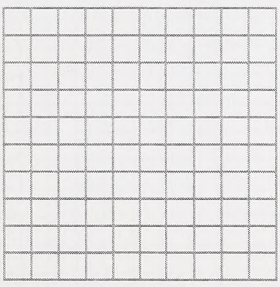
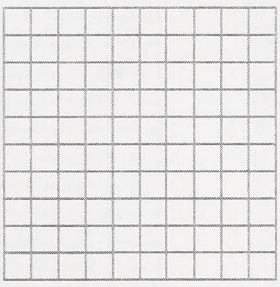
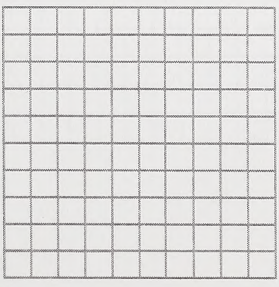
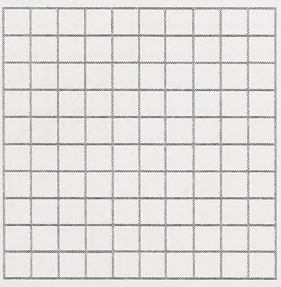
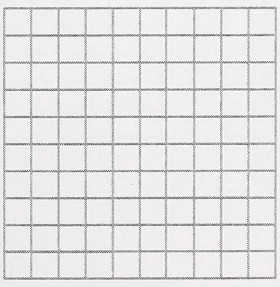


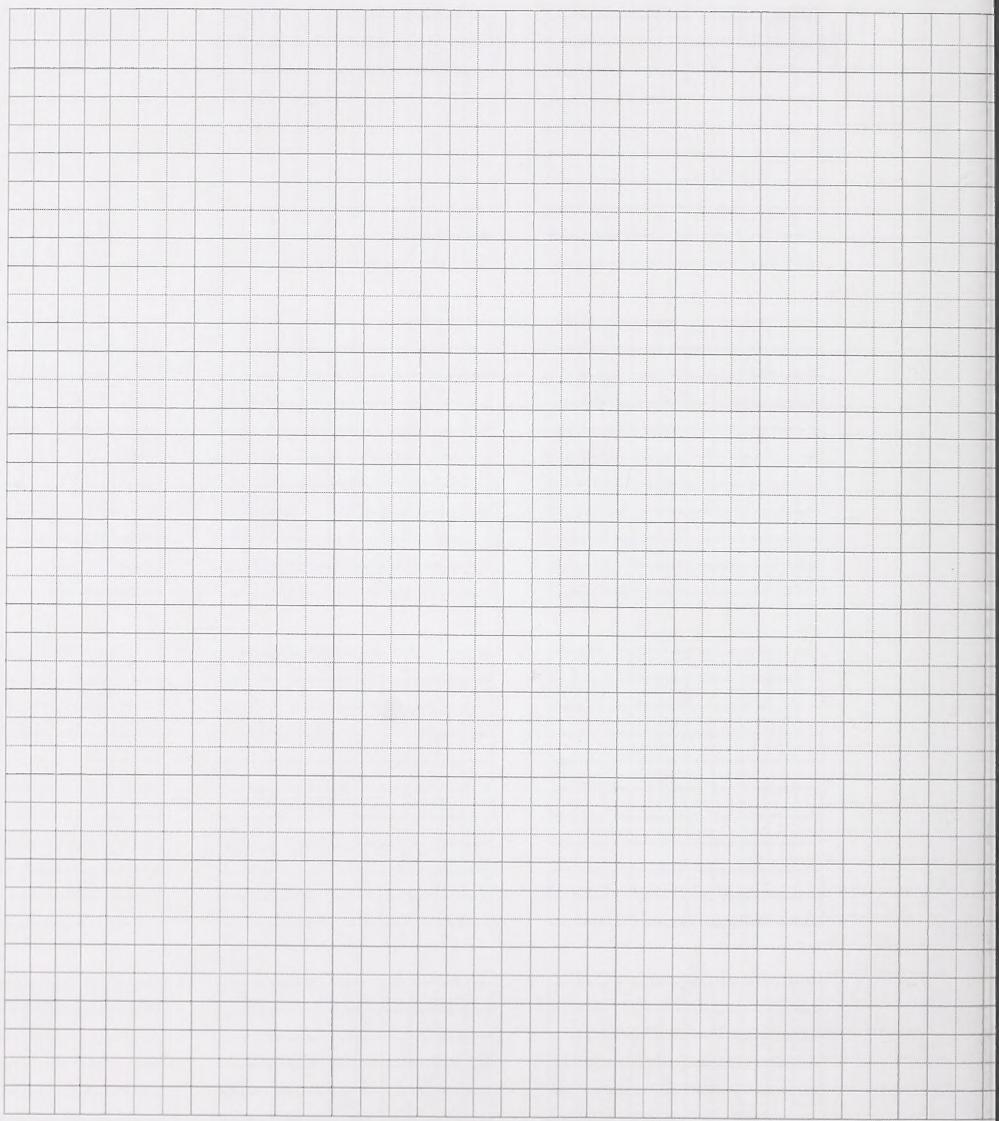
Hundred Squares





Hundred Squares



ISBN 978-0-7741-3054-7